REMARKS

Reconsideration of this application, as amended, is requested.

Claims 6-15 remain in the application and under consideration. Claims 1-5 are directed to non-elected subject matter and have been canceled without prejudice in this Amendment. Claims 16-18 also are directed to non-elected subject matter. Those claims currently remain in the application but have been withdrawn from further consideration. Claim 6 has been amended to define the invention more clearly. Claims 7-14 have been amended to ensure that the preamble of each of those claims conforms to the preamble of claim 6. Claim 15 has been amended into independent form with all of the limitations of claim 6.

The applicants and the assignee are pleased to note that the Examiner considered claim 15 to be directed to patentable subject matter. Claim 15 depended directly from independent claim 6. Claim 15 has been amended into independent form with all of the limitations of claim 6. Hence, claim 15 is believed to be in condition for allowance.

Claims 6-10, 13 and 14 were rejected under 35 USC 103(a) as being obvious over U.S. Patent No. 5,983,732 to Hering et al. considered in view of U.S. Patent No. 6,559,094 to Korotkikh et al. The Examiner noted that Hering et al. teaches a detector for detecting substances of interest collected on a plate. The Examiner openly acknowledged that Hering et al. does not teach a foamed trap having a reticulated open cell structure. The Examiner also acknowledged that Hering et al. does not teach a foamed metal trap approximately 2 mm thick. In an effort to address these acknowledged deficiencies of Hering et al., the Examiner turned to Korotkikh et al. The Examiner noted that Korotkikh et

al. teaches catalytic material for selective oxidation. The materials were considered by the Examiner to be foamed metal catalysts that are intended to trap air contaminants. The Examiner noted that the catalytic materials of Korotkikh et al. are heated to vaporize the trapped species.

Counsel concurs with the Examiner's assessment of Hering et al. Hering et al. has precisely the deficiencies that are considered in the background section of the subject application. In particular, the solid metal plate of Hering et al. that is intended to collect substances of interest is slow to heat and slow to cool. As a result, the Hering et al. detector would have a relatively long cycle time between testing samples. The slow cycle time of such a detector results in very slow processing of people or packages to test for explosives, narcotics or other substances of interest. The slow processing leads to unacceptable delays at a checkpoint.

Korotkikh et al. relates to a catalyst for a catalytic converter to achieve selective oxidation of carbon monoxide in a gas stream that contains hydrogen. The Korotkikh et al. product is made by "depositing by electric arc spraying a metal feedstock onto a metal substrate and then depositing a catalytic material onto the metal substrate. The foamed material of Korotkikh et al. is selected to maximize the surface area on which the catalyst can be deposited. Thus, a larger surface area is provided for the catalytic reactions that are intended to achieve the oxidation of carbon monoxide in a gas stream. The foamed substrate of Korotkikh et al. is not intended to function as a trap in the Korotkikh et al. environment, but rather provides the surface area that receives the catalyst. Furthermore, it is well known that catalytic converters must be raised to a "light-off" temperature to function, and remain at the elevated "light-off" temperature during

operation. Thus, most catalytic converters are designed to retain heat for optimal performance of the catalytic converter.

In sharp contrast, the subject invention is intended to quickly heat and then quickly cool. Particles of interest will be trapped while the trap is cool. The heater then heats the foamed metal trap quickly, but sufficiently to vaporize the material on the trap and to transport the vaporized material to the detector. The trap then must be cooled very quickly so that the cooled trap can receive the flow of air from the testing station for the next testing cycle. Thus, whereas a catalytic converter is intended to retain a high temperature to ensure optimum operation, the subject invention is intended to cycle very quickly from hot to cool temperatures. This rapid heating and cooling requirement is noted, for example, in the last sentence on page 3 of the subject application.

It is submitted that the skilled artisan would not turn to the technology of a catalytic converter in an effort to shorten the heating/cooling cycle time of the detecting apparatus of the subject invention. Furthermore, Korotkikh et al. clearly requires the foamed metal substrate to be coated with a catalyst that will oxidize the carbon monoxide in the gas stream.

Amended claim 6 clearly defines the trap as consisting of a foamed metal. It is believed that the language of amended claim 6 distinguishes patentably over Korotkikh et al. The hypothetical combination of Hering et al. and Korotkikh et al. would require the skilled artisan to ignore the conventional catalytic converter technology of maintaining high temperatures without rapid cooling, deconstructing the Korotkikh et al. catalytic converter by removing a critical catalyst and then combining the skeletal remains of the Korotkikh et al. catalytic converter into a detector. That hypothetical deconstruction and reconstruction

is not suggested by the prior art. Accordingly, it is submitted that the invention defined by amended claim 6 and its dependent claims 7-10, 13 and 14 is not suggested by Hering et al. in view of Korotkikh et al.

Claims 11 and 12 were rejected under 35 USC 103(a) as being obvious over Hering et al. in view of Korotkikh et al. and further in view of Jenkins. Jenkins does not overcome the deficiencies of Hering et al. and Korotkikh et al. as described above.

In view of the preceding amendments and remarks, it is submitted that the claims remaining under consideration in this application are directed to patentable subject matter, and allowance is solicited. The Examiner is urged to contact applicants attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,

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Date: March 1, 2007